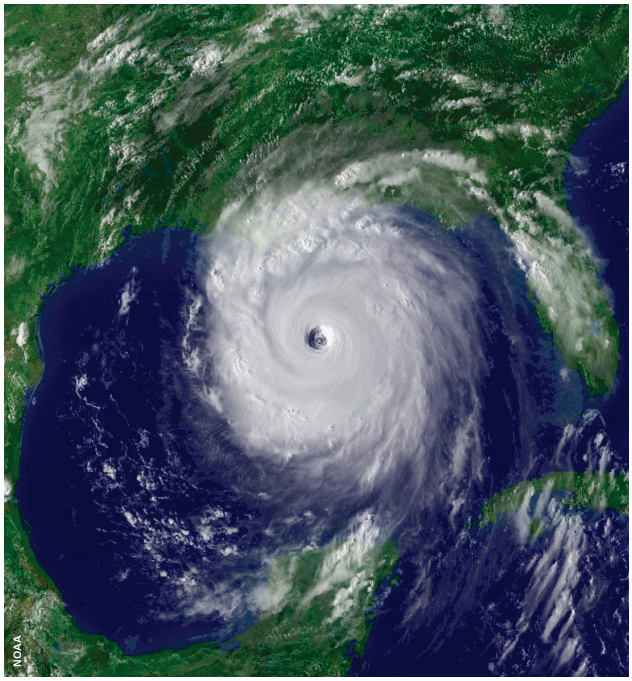
SEA GRANT FACILITATES HURRICANE RECOVERY

By Paula Ouder, Louisiana Sea Grant

Sea Grant contributes to the understanding of long-term coastal and environmental trends through research, education and engagement with stakeholders. The program's unique combination of strategies and its credibility with coastal communities make us uniquely able to assist constituents who find their lives and livelihoods suddenly upended by natural disasters. Local programs in the Gulf of Mexico have proven to be vital partners in community recovery from the devastation of recent hurricanes.

Boats and fisheries

The devastation wrought by these powerful hurricanes could not have come at a worse time for Gulf of Mexico shrimpers, who were already struggling under the double yoke of high fuel costs and low prices for their catch. Countless commercial and recreational boats sank or were broken apart by violent storm surge. Others remained seaworthy but were grounded in area marshes or flung inshore, sometimes by miles.



For the captains whose craft survived, returning to work was among their top priorities. Washington, Alaska and Louisiana Sea Grant programs worked with a host of agencies and organizations to secure the donation of a surplus Marine Travelift from Valdez, Alaska, to the Plaquemines Parish government in Louisiana. The mobile boat hoist moves vessels in and out of the water and replaced the boatyard's launching equipment that was lost in Katrina and Rita. New devices of this type cost upward of $250,000.

Two Texas Sea Grant county agents made it their mission to reunite hundreds of recreational watercraft with their owners. The agents recorded GPS coordinates and took photographs of roughly 80 derelict vessels scattered during Hurricane Ike. By cross-referencing state registration numbers with Texas Parks and Wildlife Department records, boat owners were identified and received postcards detailing the exact location of their vessels. This assistance sped the insurance reimbursement process.

One Louisiana Sea Grant agent laid the groundwork for future collaboration and disaster planning to serve Louisiana's fishing industry. He teamed up with community relations personnel from the Federal Emergency Management Agency (FEMA) to provide reliable information to the fishing community, assistance with housing and utilities for displaced residents, and help restoring government and business services. The agent also spoke at public meetings about industry needs and possible solutions.

Recovery

Submerged debris threatens economically viable fishing grounds and public safety, and storm surge from Hurricanes Katrina and Rita generated an unprecedented number of these underwater hazards. The National Oceanic and Atmospheric Administration (NOAA) turned to Sea Grant to meet its communication goals when NOAA established the Gulf of Mexico Marine Debris Project in 2006. For three years, NOAA contractors used sonar to scan the near-shore waters in Louisiana, Mississippi and Alabama to locate sunken items. Data and maps detailing the location and size of each target were posted online. Louisiana Sea Grant and the Mississippi-Alabama Sea Grant Consortium worked together to design and execute a multi-media outreach campaign to make the boating public aware of this potentially lifesaving information. The fruits of this partnership drew more than 60,000 visitors to the project's website and helped safeguard recreational, charter and commercial boaters and their vessels and fishing gear.

Restoration

Coastal land is another casualty of recent storms. The success of a three-acre beach restoration pilot project funded

by the Mississippi-Alabama Sea Grant Consortium led to a $100,000 grant from the U.S. Army Corps of Engineers. This funding will restore 26 linear miles of Mississippi beach. Community volunteers have donated more than 700 hours to the project, securing the upper-beach areas with more than 10,000 new plants.

Economic impact

Obtaining timely, accurate estimates of the economic impact of a natural disaster is crucial for allocating resources and obtaining federal recovery funds. Research developed by Louisiana Sea Grant-sponsored economists resulted in a new technique for gauging the impacts of hurricanes on coastal fishing infrastructure. Their method utilizes field surveying, revenue and market data, and data on storm surge height to provide a more rapid and spatially precise estimate of damages. A process that required two years to develop and complete after Hurricanes Katrina and Rita took only two weeks to complete after Hurricanes Gustav and Ike.

The small fishing community of Delcambre, La., was inundated during Hurricane Rita, and fewer than two dozen of its nearly 1,000 homes and businesses escaped flooding. With assistance from Sea Grant professionals and architecture and design students from area universities, town leaders prepared a comprehensive business plan and a grant application that was ready as soon as recovery funds were released. Consequently, the town was awarded $2.2 million from the Louisiana Recovery Authority for redevelopment. Parish government will provide an additional $600,000. The funding will transform the industrial waterfront into a mixed-use residential and business zone. In addition to improving safety, aesthetics and functionality, the project is expected to increase local tourism.

Building resiliency

As extraordinarily destructive as the 2005 and 2008 hurricane seasons were, more are likely coming. Preparing for future threats will save lives and property, diminish economic losses and expedite recovery. Education is one key to helping coastal residents understand their vulnerability and helping them safeguard against it.

The Louisiana Sea Grant Law & Policy Program published the 250-page *Louisiana Hazard Mitigation Guidebook* to explain issues from zoning and structure siting to construction methods and legislation that can be employed to build more hazard-resistant communities. Based on a similar guidebook developed by Hawai'i Sea Grant, the Louisiana guidebook outlines strategies to reduce the risks from coastal natural hazards such as storm surge, other flooding, subsidence and sea level rise, and demonstrates how communities can adopt a flexible approach to hazard planning. The guidebook is now being used as a text at the Louisiana State University law school. Approximately 650 to 700 books have been distributed to date. Sea Grant also offered workshops for Louisiana citizens and government officials to help them understand and implement the strategies outlined in the guidebook. Videos of the workshops and copies of the guidebook are archived online and available free of charge.

"The Next Storm Surge" outreach series graphically demonstrated how vulnerable communities and individuals are to hurricane flooding. Louisiana Sea Grant Extension agents and disaster and GIS specialists assessed the vulnerability of eight of the state's 24 coastal parishes. Using computer modeling and local data collected on the ground after hurricanes, they prepared maps showing the extent of potential flooding under various storm scenarios. They superimposed images of flood waters on photographs of local businesses and landmarks to help residents visualize predicted impacts. More than 2,000 people attended the program at local libraries. Maps and printed materials remained on display for library patrons after each program to extend the project's impact. ❖